



FORESTRY, FIRE & STATE LANDS REQUEST FOR PROPOSALS Cover Sheet



Project Title	Predicting the effects of a drying Great Salt Lake on <i>Phragmites</i> invasion		
Lead Project Sponsor	Utah State University		
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Project Description / Abstract	<p>The drying of the Great Salt Lake contributes to many ecological and economic challenges. We focus on one potential consequence of this drying, the invasion of the non-native grass <i>Phragmites australis</i>. <i>Phragmites</i> is widespread in many Great Salt Lake wetlands and its invasion threatens critical habitat for migratory birds of the Pacific flyway. We will identify the relationship between the drying of the Great Salt Lake, salt stress, and <i>Phragmites</i> growth and spread, and use results to suggest more effective water allocations to wetlands to counteract <i>Phragmites</i>. To obtain these results, we will (i) conduct greenhouse experiments, (ii) assess the feasibility of a new method to correlate historical <i>Phragmites</i> presence with water levels at one wetland site along the Great Salt Lake, and (iii) use optimization modeling. The proposed research expands on current work by the PI and co-PI to identify the impacts of drought on wetland plant communities and develop an optimization model to recommend better allocations of scarce water to improve wetland plant and bird communities at the Bear River Migratory Bird Refuge.</p>		
Project Funding	Amount Requested \$45,593	Matching Funds \$0.00	Total Project Cost \$45,593